

This listing of claims will replace all prior versions and listings of claims in this application:

b.) Listing of Claims

1. (Currently amended) A method for distributed data archiving, comprising the steps of:

accessing patient medical data from at least one external source;

segmenting the patient medical data into a plurality of information groups with each information group corresponding to information about a particular patient;

providing a data archiving system comprised of a plurality of archival storage media;

storing each information group onto an archival storage media, said information groups being stored on said archival storage media with each group having an identification, the identification being that is unique from ~~that of any all~~ other information groups stored within said archival storage media and all other archival storage media, ~~so that enabling~~ said information groups ~~are capable of being to be~~ independently accessed, within or without the data archiving system in which the information groups were created;

each said information group being stored entirely only on one of said plurality of archival storage media;

encoding a unique identifier on said one of said storage media to uniquely identify ~~that~~ the storage media from ~~that of~~ all other storage media;

said encoding step including recording an index file having at least an identifier and a database file on said one of said storage media, wherein the database file recorded on the storage media contains information describing clinical procedures of the patient medical data stored on the storage media; and

independently accessing said one of said storage media at a site other than said data archiving system by reading said index file.

2. (Original) A method according to claim 1, wherein said archival storage media comprise digital versatile disks (DVDS).

3. (Original) A method according to claim 1, wherein each said archival storage media comprises a self-contained database file for each of said information groups.

4. (Original) A method according to claim 3, wherein said database file is implemented by Digital Image Communications for Medicine (DICOM-3).

5. (Original) A method according to claim 3, wherein said information groups comprise meta-data and image data.

6. (Original) A method according to claim 5, wherein each of said archival storage media comprises an embedded image player for viewing the images.

7. (Original) A method according to claim 5, wherein each of said archival storage media comprises an application for interpreting the meta-data.

8. (Original) A method according to claim 1, further comprising the step of creating an index file on each of said archival storage media for characterizing said information groups stored thereon.

9. (Original) A method according to claim 1, further comprising the step of creating an executable program on each of said archival storage media for retrieving said information groups stored thereon.

10. (Original) A method according to claim 1, further comprising the step of recording said information groups on said archival storage media as near-line and off-line storage.

11. (Original) A method according to claim 1, wherein a first subset of said archival storage media is provided as on-line storage.
12. (Original) A method according to claim 1, wherein a second subset of said archival storage media is provided as near-line storage.
13. (Original) A method according to claim 1, wherein a third subset of said archival storage media is provided as off-line storage.
14. (Previously presented) A method according to claim 11, wherein said on-line storage comprises a hard disk.
15. (Previously presented) A method according to claim 12, wherein said near-line storage comprises a jukebox storage for providing sequentially selectable access to at least one archival storage media.
16. (Previously presented) A method according to claim 13, wherein said off-line storage comprises shelf storage for said archival storage media.
17. (Currently amended) A distributed data archiving system, comprising, a user interface for controlling the system, said user interface including a processor for receiving data from a plurality of external sources and segmenting the data into a plurality of information groups; and a memory storage comprised of a plurality of separate archival storage media for storing information groups, each said information group being stored entirely only on one of said plurality of archival storage media; each storage media having comprising: 1) an identification, the identification being that is unique from that of any other of said storage media stored thereon or stored on any other archival storage media; and 2) a database file containing information describing clinical procedures of the information groups stored on the storage media; so that said information groups are capable of being independently accessed, within or without the archiving system in which the information groups were created;

~~the an~~ available storage capacity of the media being determined by using a predefined percentage full value for the storage media, wherein ~~the an~~ information group is recorded on the storage media if the percentage full value is not exceeded and wherein if the recording of the information group onto the storage media exceeds the percentage full value then a different storage media is selected.

18. (Original) A distributed data archiving system according to claim 17, wherein said user interface comprises a personal computer.
19. (Original) A distributed data archiving system according to claim 17, wherein said external source comprises a workstation.
20. (Original) A distributed data archiving system according to claim 17, wherein said external source comprises a network compatible device.
21. (Original) A distributed data archiving system according to claim 17, wherein said memory storage comprises on-line, near-line, and off-line storage media.
22. (Original) A distributed data archiving system according to claim 21, wherein said on-line storage medium comprises a hard disk.
23. (Original) A distributed data archiving system according to claim 21, wherein said on-line storage medium comprises a redundant array of independent disks.
24. (Original) A distributed data archiving system according to claim 21, wherein said near-line storage medium comprises a jukebox storage for providing sequentially selectable access to said archival storage media.
25. (Original) A distributed data archiving system according to claim 21, wherein said off-line storage medium comprises shelf storage for said archival storage media.

26. (Original) A distributed data archiving system according to claim 17, wherein said user interface creates an index file for characterizing all of said information groups to be stored on said archival storage media and stores said index file and said information groups on said archival storage media.
27. (Currently amended) A distributed data archiving system according to claim 17, wherein said user interface creates an executable program for retrieving said information groups stored on said archival storage media and stores said executable program on ~~and~~ said archival storage media.
28. (Original) A distributed data archiving system according to claim 17, wherein said archival storage media comprise digital versatile disks (DVDs).
29. (Original) A distributed data archiving system according to claim 17, wherein each said archival storage media comprises a self-contained database file for each of said information groups.
30. (Original) A distributed data archiving system according to claim 29, wherein said database file is implemented by Digital Image Communications for Medicine (DICOM-3).
31. (Original) A distributed data archiving system according to claim 21, further comprising a media recorder for recording said information groups on said archival storage media as near-line and off-line archival storage media.
32. (Currently amended) A method according to claim 1 including independently accessing said one of said storage media by accessing the storage media at a clinical imaging station allowing ~~the~~ a review of archived images outside of the data archiving system in which ~~it~~ the storage media was originally created.
33. (Previously presented) A method according to claim 1 including encoding an index file that also has a data program and an image player.

34. (Previously presented) A method according to claim 1 wherein the identifier comprises a volume label.
35. (Currently amended) A method according to claim 33 wherein the database file holds all of ~~the~~ meta-data required to completely describe a procedure or study stored on the storage media.
36. (Currently amended) A method according to claim 1 including determining ~~the~~ an available storage capacity by using a predefined percentage full value for the storage media.
37. (Previously presented) A method according to claim 36 wherein the information group is recorded on the storage media if the percentage full value is not exceeded.
38. (Previously presented) A method according to claim 37 wherein if the recording of the information group onto the storage media exceeds the percentage full value then a different storage media is selected.
39. (Currently amended) A method according to claim 1 including determining the available storage capacity of the storage media and comparing ~~the~~ an available storage capacity of the storage media to a storage capacity that of the information group.
40. (Currently amended) A distributed data archiving system according to claim 17 wherein a unique identifier is encoded on said one of said storage media to uniquely identify ~~that~~ the storage media from that of all other storage media, including recording an index file on said one of said storage media.
41. (Previously presented) A distributed data archiving system according to claim 40 wherein the same information group is stored on more than one storage medium having a different unique identifier associated with each.

42. (Currently amended) A method for distributed data archiving, comprising the steps of:

accessing patient medical data from a plurality of external sources;
segmenting the patient medical data into a plurality of information groups;
providing a data archiving system comprised of a plurality of archival storage media;
storing each information group onto an archival storage media;
said information groups being stored on said archival storage media with each group having an identification, the identification being that is unique from that of any other information groups stored within said archival storage media and all other archival storage media ~~so that enabling~~ said information groups ~~are capable of being to be~~ independently accessed, within or without the data archiving system in which the information groups were created;
each said information group being stored entirely only on one of said plurality of archival storage media by the following sub steps;
determining ~~the an~~ available storage capacity of the storage medium,
comparing the available storage capacity of the storage medium to ~~that of~~ the information group that is to be stored,
recording the information group on the selected storage medium only if ~~the a~~ size of the information group is smaller than the available storage capacity of the storage medium, and
selecting another storage medium if the size of the information group is larger than the available storage capacity of the storage medium;
encoding a unique identifier on said one of said storage media to uniquely identify ~~that~~ identifying the storage media from that of all other storage media;
said encoding step including recording an index file on said one of said storage media, the index file including a database file recorded on the storage

media containing information describing clinical procedures of the patient
medical data stored on the storage media; and
independently accessing said one of said storage media at a remote site other
than said data archiving system by reading said index file.

43. (currently amended) A ~~distributed data archiving system~~ method according to claim 42 wherein the same information group is stored on more than one storage medium having a different unique identifier associated with each.
44. (new) A method according to claim 1, wherein the database file further contains patient demographic information relevant to the clinical procedures recorded on the storage media.
45. (new) A distributed data archiving system according to claim 17, wherein the database file further contains patient demographic information relevant to the clinical procedures recorded on the storage media.
46. (new) A method according to claim 42, wherein the database file further contains patient demographic information relevant to the clinical procedures recorded on the storage media.

c.) Remarks

Claims 1-46 are pending in this application. Claims 1, 17, 27, 32, 35, 36, 39, 40, 42, and 43 have been amended in various particulars as indicated hereinabove. New Claims 44-46 have been added to alternatively define Applicants' invention.

Claims 1, 17, 27, 32, 35, 36, 39, 40 and 42 were objected to because of informalities. These claims have been amended to overcome those informalities.

Claims 1-16, 32-35, 39 and 42 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sitka *et al.* (U.S. Patent No. 6,349,373) in view of Cooke, Jr. *et al.* (U.S. Patent No. 6,574,629) and further in view of DeClute *et al.* (U.S. Patent No. 5,053,948). In related rejections, claims 36-38 were rejected under 35 U.S.C. 103(a) as being over Sitka *et al.* (U.S. Patent No. 6,349,373) in view of Cooke, Jr. *et al.* (U.S. Patent No. 6,574,629) and further in view of DeClute *et al.* (U.S. Patent No. 5,053,948), and further in view of Sacilotto, Jr. *et al.* (U.S. Patent No. 6,763,523); claims 17-26, 28, 29, 31 and 40 were rejected under 35 U.S.C. 103(a) as being over Sitka *et al.* (U.S. Patent No. 6,349,373) in view of De Clute *et al.* (U.S. Patent No. 5,053,948), and further in view of Sacilotto, Jr. *et al.* (U.S. Patent No. 6,763,523); claims 27 and 30 were rejected under 35 U.S.C. 103(a) as being over Sitka *et al.* (U.S. Patent No. 6,349,373) in view of DeClute *et al.* (U.S. Patent No. 5,053,948), and Sacilotto, Jr. *et al.* (U.S. Patent No. 6,763,523), and further in view of Cooke, Jr. et al (U.S. Patent No. 6,574,629); claim 41 was rejected under 35 U.S.C. 103(a) as being over Sitka *et al.* (U.S. Patent No. 6,349,373) in view of DeClute *et al.* (U.S. Patent No. 5,053,948), and Sacilotto, Jr. *et al.* (U.S. Patent No. 6,763,523), and further in view of Blickenstaff *et al.* (U.S. Patent No. 5,537,585); and claim 43 was rejected under 35 U.S.C. 103(a) as being over Sitka *et al.* (U.S. Patent No. 6,349,373) in view of Cooke, Jr., *et al.* (U.S. Patent No. 6,574,629), and further in view of DeClute *et al.* (U.S. Patent No. 5,053,948), and further in view of Blickenstaff *et al.* (U.S. Patent No. 5,537,585). These rejections are respectfully traversed for the following reasons.

Each of the independent claims has been amended to describe a database file that contains information describing clinical procedures of the patient medical data stored on the storage media. This feature is disclosed in the published application, US 2002/0046215 A1, at paragraph [0030]. Also disclosed in that paragraph is the subject matter of the new claims.

We know from the specification that this index file enables "the information groups 20A, 20B, 20C, and 20D stored on the archival storage medium 10 to be accessed, processed and viewed on a wide range of personal computers and operating systems." See US 2002/0046215 A1, at paragraph [0016]. Thus, in one specific example, the DVD archive media need not be accessed only in the archive system, but could be carried to a standard PC and accessed. This can be very expedient.

None of the applied reference shows or suggests a similar system. In the pending Action, the index was analogized to the DeClute index log. See pending Action at bottom of page 5. Two sections of DeClute were cited:

Within each optical disk of the optical archive system 50 there is an index log. The index log serves the purpose of an index file on a conventional magnetic disk except that it is constructed as a log since erasures cannot be made to it. Thus, for example, file headers cannot be erased from the log but newer versions can be written 55 thereon superseding older versions. A sequence number field in the index log indicates the most recent version of the file header. The file header format on the optical disk itself contains information about the actual files contained on that disk and contains all the appropriate 60 information for the files which are there. This information is contained in the large index file which includes such information as the serial numbers, the logical names, the physical locations, and individual attributes (access, owner, etc.) of all of the files on the disk. It is a 65 block of this information that is written into the token file located in the magnetic storage of the controlling computer.

Column 3 of US 5,053,948 to DeClute, *et al.*

Application No.: 09/920,973
Amendment dated: March 20, 2006
Reply to Office Action of October 20, 2005
Attorney Docket No.: XP-1204

Optical file id, is the file id number of the file on the optical disk. Each file on an optical disk has a unique optical file id. The serial number and the optical file id can be used in combination as a key to find information on the optical file that is cached on magnetic disk. Information on the most frequently used optical disks is cached on magnetic disk in order to speed up the process of mounting an optical disk in a read/write unit.

Column 5 of US 5,053,948 to DeClute, *et al.*

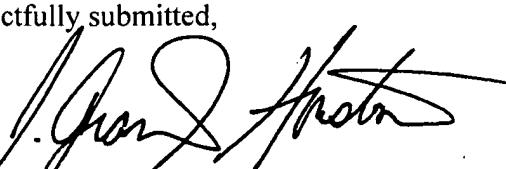
Neither of these cited portions of DeClute shows nor suggests the claimed invention, however. It does not suggest to have database file, on the media, that contains information describing clinical procedures of the patient medical data stored on the storage media. The DeClute simply suggests a file log with low level data such as ownership. There is no suggestion to describe clinical procedures of the patient data, as claimed.

Absence of limitations in applied references advocates against obviousness.
Litton Systems, Inc. v Honeywell, Inc., 87 F.3d 1559 at 1569 (Fed. Cir. 1996).

Thus, Applicants request withdrawal of the rejections.

Applicants believe that the present application is in condition for allowance. A Notice of Allowance is respectfully solicited. Should any questions arise, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

By 
J. Grant Houston
Registration No.: 35,900
Tel.: 781 863 9991
Fax: 781 863 9931

Lexington, Massachusetts 02421
Date: March 20, 2006